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# *Soy Beans*

A Most Valuable Annual Legume  
Which Can Be Grown To Advantage  
On Practically Every Northwest Farm

For

Hay, Soil Improvement,  
Silage, Fall Pasture,  
Feed Concentrate,  
A Cash Crop



# The Many Uses of Soy

**S**OY BEANS have been the most important legume in Asia for over five thousand years. Introduced in the United States over one hundred years ago, it is only during the last twenty-five years that they have become an important agricultural crop. Soy Beans are so adaptable to different conditions and have such a variety of uses that they can be profitably grown on practically every Northwest farm.

## SOY BEANS FOR HAY

Soy Beans make excellent hay when properly cured. They are relatively high in digestible protein, higher in feeding value than Timothy or Clover, and about equal to Alfalfa. Soy Beans will produce good yields of rich leguminous hay on poor, sandy soils or on soils deficient in lime and so acid that Clovers cannot be successfully grown. As an emergency hay crop they can be planted as late as early July, but for maximum returns, Soy Beans should be planted at or soon after Corn planting time. They should be cut for hay as the lower leaves begin to turn yellow when the pods are partially filled, and should be cut early enough to insure plenty of good curing weather. Soy Bean hay should be cut and handled when dry of dew or rain. If the weather is favorable for hay making, the hay can be turned into windrows within a few hours where it may be left from three to five days, depending on the drying. When well dried out, the windrows can be tipped over with the end of a side delivery and allowed to dry on the underside for a few hours before mowing or stacking. However, if the weather should be unfavorable, it is advisable to put Soy Bean hay in small cocks as soon as possible so that the hay can go through a sweat. While unfavorable weather may result in discolored and poor looking hay, it is a fact that Soy Bean hay will take more punishment during curing than any other legume hay and still make good feed.

In some sections a mixture of Sudan and Soy Beans is recommended, planting 50 pounds of Soy Beans and 10 pounds of Sudan per acre.

## SOIL IMPROVEMENT

Plowed under Soy Beans furnish a greater amount of green manure than any other annual legume, and also add nitrogen to the soil through their root tubercles. While well inoculated Soy Beans obtain  $\frac{2}{3}$  of their nitrogen from the air and only  $\frac{1}{3}$  from the soil, it is a fact that Soy Beans do remove some plant food unless part of the plant is returned to the Soil as straw or manure, since less than  $\frac{1}{5}$  of the Soy Bean plant is below the ground.



*Inoculated Soy Bean Root nodules containing nitro*





# Create A Great

A crop of Soy Beans has a loosening effect upon the soil, which is particularly beneficial on land that is normally firm or crusted. This is partially due to the effect of the shading and also, no doubt, in part to the increased micro-activity in the soil. This loosening effect is a great asset as it leaves the ground in splendid condition for the seeding of Winter Rye or Winter Wheat. In a rotation where this crop sequence is followed, the ready prepared seed bed results in a considerable saving in field preparation. Because of the loosening effect of Soy Beans, fields which are subject to erosions should be seeded to some crop which will grow up enough in the fall to anchor the soil. A seeding of grain, even though it will be killed down, will still have some value as a soil holding crop and be helpful.

## COMBINATION WITH CORN LAGE AND PASTURE



*Planting in cultivated rows enables better control of no  
ductive crop*



# at Demand for Them

## SOY BEANS AS A HIGH PROTEIN FEED

Soy Bean seed is one-third protein and, in addition, contains two important vitamins, making it a valuable home grown supplemental feed. Ground Soy Beans are superior to cottonseed meal and about equal to linseed oil meal for milk and butterfat production. Ground Soy Beans also serve as a high protein supplement for steers, and as a supplement to tankage, for hogs. One hundred pounds of ground Soy Beans will replace approximately 83 pounds of tankage and 22 pounds of corn for swine feed. On the farm, Soy Beans grind better when mixed with corn, barley or oats.

## SOY BEANS A READY CASH CROP

The many commercial utilizations of Soy Beans and Soy Bean products provides a ready cash market for yellow Soy Beans. The price is based on United States No. 2 grade Soy Beans inspected on delivery by a Federal inspector.

## SOY BEANS SEEDING AND CULTIVATION

While Soy Beans are most productive on the better soils, they can be grown profitably on soils of lower productivity, as well as on soils too acid for the successful growing of Clovers. Thorough inoculation of Soy Beans is an essential requirement for successful growing. A Soy Bean crop loosens the soil to such an extent that there is serious danger of erosion on sloping land unless the crop is immediately followed by a Fall planting of grain to hold the soil through the Winter.



*Control of weeds, permits earlier planting and produces a better and more productive crop of either hay or beans.*



## SOY BEAN SEED BED

The seed bed should be as carefully prepared as for Corn. Either Fall plowing or Spring plowing is satisfactory, but in either case, the ground should be well worked for weeds, and a final harrowing or disking should be done just ahead of the seeder.

## TIME OF PLANTING

Soy Beans, as an emergency hay crop, can be seeded as late as early July, but like Corn, produce the maximum crop of either hay or Beans when planted relatively early and, when possible, Soy Beans should be planted at Corn planting time or soon after.

## SEEDING

The seeding should be shallow, preferably not over  $1\frac{1}{2}$  inches in light soil, and not over  $\frac{1}{2}$  inch to 1 inch in heavy soil. Soy Beans are sometimes sown broadcast for hay, but the best methods are to drill, solid, like grain, or in cultivated rows. The tendency is toward cultivated rows as this method enables better control of weeds, permits earlier planting, and results in a better and more productive crop of either hay or beans.

In cultivated rows, the seed should be about one inch apart in the row, and while it has been customary to have the rows 30 to 36 inches apart, special cultivating machinery has tended to narrow the distance between rows from 18 to 24 inches. (The seeding rate in rows per acre is approximately 50 to 60 pounds.) When drilled solid like small grain, the seeding rate is approximately 120 pounds per acre.

The grain drill is commonly used for solid sowing, but it can also be used for row planting by closing the feeds. Corn planters can also be used for row planting.

In planting Soy Beans with Corn, each is drilled separately in the same hill, but at the ratio of two Corn to one Soy Bean.

## CULTIVATION

The most effective cultivation that can be given the Soy Bean crop is careful preparation of the seed bed and complete destruction of all weeds just before seeding. The common tools for cultivating Soy Beans are those for cultivating Corn, but with the tendency towards narrower rows, these tools have been largely replaced by special cultivators. The rotary hoe is especially valuable, particularly on soils that are inclined to crust. If the soil becomes crusted after seeding before the young plants are up, the rotary hoe will break the crust and enable the Soy Beans to come through the surface.

Soy Beans should be cultivated to kill the weeds while they are in the seedling stage, usually not longer apart than a week to ten days. When the Soy Bean plants have obtained some size and have several leaves, cultivation should only be done when the Beans are dry.



## SOY BEAN VARIETIES

**T**HERE are many varieties of Soy Beans, but only a few are as yet adaptable for the Northern states, although more new adapted varieties are becoming available each year. Where Soy Beans are to be grown for hay or soil improvement, a somewhat later maturing variety is more preferable than the earliest types that can be grown for seed purposes.

For producing Soy Beans for market, yellow varieties are preferable, but for other purposes, color is not a factor. Your Northrup, King & Co. dealer can supply you with Soy Beans adapted for your requirements.



*A soy bean plant. Note heavy leaf production and many pods.*

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